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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,789	04/06/2006	Mordechal Gazit	1553-US	6504
24505	7590	11/15/2007	EXAMINER	
DANIEL J SWIRSKY			LIU, HARRY K	
55 REUVEN ST.			ART UNIT	
BEIT SHEMESH, 99544			PAPER NUMBER	
ISRAEL			3662	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/574,789

Applicant(s)

GAZIT ET AL.

Examiner

Harry Liu

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 18-22 and 34 is/are rejected.
- 7) ☒ Claim(s) 14-17, 23-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/11/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 14-17, 23-33 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims 13, 22. Claims 13 and 23 are multiple claims itself, therefore, any claim depends on it are improper dependent claims. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 19-20, 22, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language.

This claim is an omnibus type claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Izumiyama (6141561).

Regarding claim 34, Izumiyama discloses a switching module adapted to double RF signals in power, comprising a plurality of RF signal input and outs.

6. Claims 1-4, 7-8, 12-13, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKay (2004/0166802) in view of Zourntod (2003/0100343).

Regarding claims 1, 2, 8, McKay discloses a **low cost phased array** antenna assembly adapted for reducing severe radiation hazards to the human body, useful for transmitting and receiving signals while taking into account the indoor/in building (closed space, claim 2) (Abstract) electromagnetic field strength, said antenna design (an indoor cell enhancer boosts signal for reducing wireless device transmission power under indoor weak signal situation in order to reduce severe radiation) comprising;

a micro-strip small size antenna (patch antenna, see FIG. 17 below) (a micro strip antenna is commonly shown as patch antenna, see Wikipedia definition);

inherently a switching device for selecting phase (paragraph 0089-0090), receiving/transmitting frequencies (array antenna receives and retransmits between base station and user with a switch) (Abstract);

a controller (microcontroller 256, see FIG. 19)/ASIC (claim 8) adapted to receive inputs from said switching device comprising; coordinating means, adapted to interconnect said switching device with an algorithm based software (programmable device, paragraph 0106);

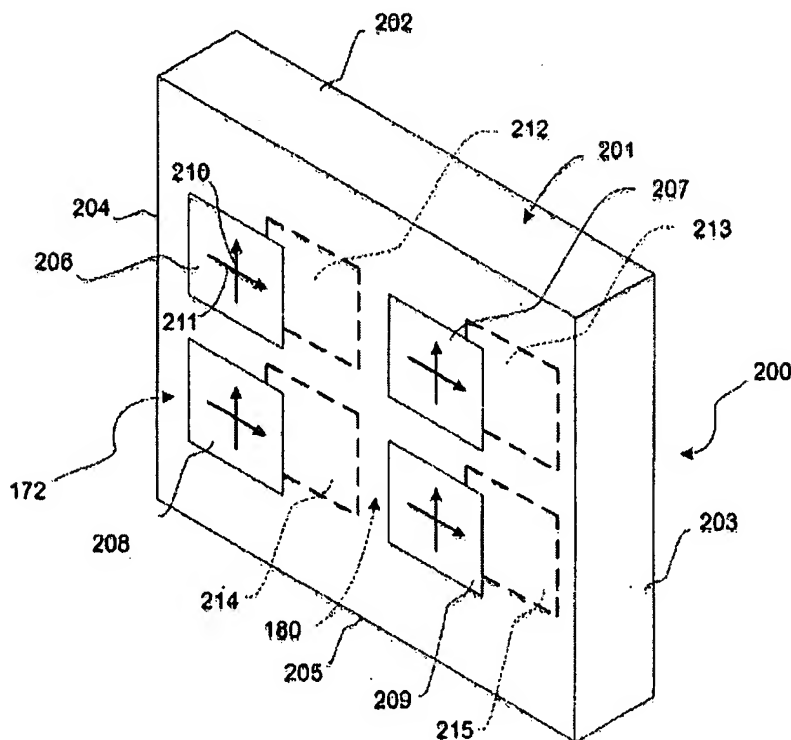


FIG 17

McKay does not disclose memory queue for recording optimal path in each indoor environment to each of associated nodes to said antenna. However, Zourntod teaches memory queue (paragraph 0127) for antenna array (Abstract) in recording (keep track of, paragraph 0200) optimal path (paragraph 0478). It would have been obvious to modify McKay with Zourntod by incorporating memory queue to record optimal path in each indoor environment in order to optimize/use each space's characteristics.

Regarding claims 3-4, McKay discloses the closed construction and openings includes claimed structures (small office includes door, windows floor, paragraph 0013).

Regarding claim 7, McKay as modified with Zourntod discloses an indoor antenna array assembly (repeater). A repeater/cell enhancer is for relaying signals for the indoor mobile to compensate for path loss. It would have been obvious to design the assembly to compensate the path loss as claimed.

Regarding claim 12, McKay as modified with Zourntod discloses an indoor antenna array assembly (repeater). An indoor antenna/smart antenna system is generally known installed with CWS or in wall way.

Regarding claim 13, McKay discloses a cell enhancer which is used for cellular signal, the antenna and its associated clients are interconnected/relayed through the enhancer to a common network (cellular system).

Regarding claim 18, McKay as modified with Zourntod discloses an indoor antenna array assembly with horizontal and or vertical polarization (paragraph 0086). An array is known with dimension ($n \times m$) of elements.

7. Claims 5, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKay (2004/0166802) in view of Zourntod (2003/0100343), as applied to claim 1 rejection above and further in view of Rappaport (2004/0143428).

Regarding claim 5, 21-22, McKay, as modified with Zourntod as applied to claim 1 rejection above, discloses all claim limitations except for disclosing the claimed equation with mode number, reflection factor or operating at frequency 900MHz to about 6 GHz, 2.4 GHz to 5.8 GHz (claims 21-22). However, Rappaport teaches path

loss equation (paragraph 0012), mode, reflection factor (paragraph 0091) and use at claimed frequencies (paragraph 0012). It would have been obvious to further modify McKay with Rappaport with claimed path loss equation in order to get an optimized calculation for indoor environment under data communication application.

8. Claims 6, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKay (2004/0166802) in view of Zourntod (2003/0100343 further in view of Rappaport (2004/0143428), as applied to claim 5 rejection above, and furthermore in view of Chen (Home Network Basis: Transmission Environments and Wired/Wireless Protocols, Prentice Hall).

Regarding claims 6, 11, McKay, as modified with Rappaport as claim 6 rejection above, discloses all claim limitations except for claimed equation. However, Chen teaches the equation of using reflection factor. It would have been obvious to, furthermore modify McKay in order to calculate the path loss with reflection factor considered.

Allowable Subject Matter

9. Claims 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The prior art does not disclose or make obvious the specific steps/algorithm of controlling the antenna assembly with ASIC especially from steps d. to g.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant is strongly recommended to amend the claims conforming to MPEP rules. Also note that a restriction/election will likely be applied at next office action since there are multiple inventions in current way of claiming.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Liu whose telephone number is 571-270-1338. The examiner can normally be reached on Monday -Thursday and every other Friday..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-270-2338.

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Harry Liu
Examiner
Art Unit 3662
November 13, 2007



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